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Indian Standard

SPECIFICATION FOR BALANCING BEAMS USED IN GYMNASTICS

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SPECIFICATION FOR BALANCING BEAMS USED IN GYMNASTICS

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Indian Standard
SPECIFICATION FOR BALANCING BEAMS USED IN GYMNASTICS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 19 September 1963, after the draft finalized by the Sports Goods Sectional Committee had been approved by the Engineering Division Council.

0.2 Balancing beams are generally used in gymnastics for women. It is a wooden beam about 5 000 mm long, 100 mm wide and raised to a maximum of 1 200 mm from the floor. The gymnast usually performs on this equipment by mounting the beam either by a vault or a jump and executes various movements.

0.3 The effectiveness and performance of the gymnast depends not only on the individual but also to a large extent on the equipment used. As such a certain amount of standardization is essential in the field of gymnastic equipment.

0.4 The Gymnastics and Sports Equipment Technical Committee (ISO/TC 83) of the International Organization for Standardization (ISO) is concerning itself with the standardization of equipment used in the international competitions. This standard is based on the draft ISO/R 490 Balancing Beam, which has been prepared by ISO/TC 83 in consultation and collaboration with the International Gymnastic Federation (IGF). The dimensions and test requirements are the same as those recommended in the draft ISO Recommendation. However, in order to assist the indigenous manufacturer, more detailed recommendations on materials have been included in this specification.

0.5 This standard is one of a series of Indian Standard specifications on gymnastic equipment. Other specifications published so far in this series are:

IS : 2459-1963	HORIZONTAL BARS USED IN GYMNASTICS
IS : 2460-1963	POMMELLED HORSE, VAULTING HORSE AND VAULTING BUCK USED IN GYMNASTICS
IS : 2462-1963	PARALLEL BARS USED IN GYMNASTICS
IS : 2463-1963	RINGS USED IN GYMNASTICS

0.6 Wherever a reference to any Indian Standard appears in this specification, it shall be taken as a reference to the latest version of the standard.

0.7 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960 Rules for Rounding Off Numerical Values (*Revised*). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

0.8 This standard is intended chiefly to cover the technical provisions relating to balancing beams used in gymnastics, and it does not include all the necessary provisions of a contract.

1. SCOPE

1.1 This standard relates to balancing beams used in gymnastics for women.

2. MATERIAL

2.1 The walking surface of the beam shall be made of a suitable good quality, well-seasoned wood which shall not splinter easily. The recommended species of timber are:

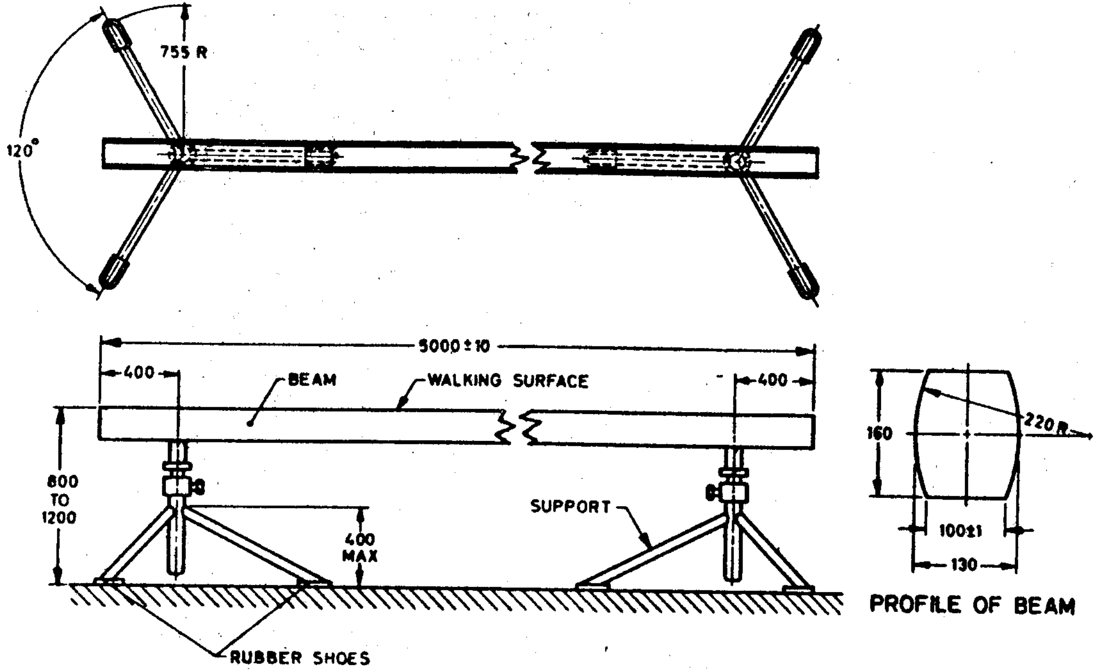
a) *Acacia arabica* (babul),
b) *Lagerstromia lanceolata* (benteak),
c) *Ougeinia dalbergioides* (sandan),
d) *Pterocarpus marsupium* (bijasal),
e) *Shorea robusta* (sal),
f) *Grewia tiliæfolia* (dhaman),
g) *Terminalia tomentosa* (laurel), and
h) *Anogeissus latifolia* (axlewood).

2.2 The supports may be either of steel or cast iron.

3. CONSTRUCTION

3.1 The shape and dimensions shall be as given in Fig. 1. Where they are not specified, they are left to the discretion of the manufacturer.

3.2 The walking surface shall be even and have a matt finish, the remainder of the beam being clear lacquered.



All dimensions in millimetres.

FIG. 1 BALANCING BEAM

3.3 The height of the beam shall be adjustable in steps of not more than 50 mm between 800 to 1 200 mm. Adjusting device for the height shall be so constructed that the efficiency of the fixture shall not diminish during use.

3.4 The arrangement of the fixed feet and adjustable leg shall be such as to ensure stability on uneven ground. The feet shall be provided with rubber shoes to reduce the possibility of sliding along the floor.

3.5 The balancing beam shall not vibrate in its supports during use.

4. TESTS

4.1 With the height adjusted at 1 200 mm, when a load of 135 kgf is applied in the centre of the beam, the deflection observed shall not be more than 8 mm.

4.2 When the height is adjusted at 1 200 mm and a load of 150 kgf is applied acting on the beam in the axis of one of the supports, the compression of the support placed on a firm floor shall not be greater than 2 mm.

5. MARKING

5.1 The equipment shall carry the manufacturer's name and identification mark on all the interchangeable components.

5.1.1 It may also be marked with the ISI Certification Mark.

Note — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	*Unit*	*Symbol*
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	*Unit*	*Symbol*
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	*Unit*	*Symbol*	*Definition*
Force	newton	N	1 N = 1 kg.m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

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